

REMARKS/ARGUMENTS

Claims 11-15, 17-20, 22 and 24-25 remain active.

Claim 11 is amended to incorporate the salient limitations of previously presented Claim 16 and as also supported by the specification on page 4, lines 1-4.

No new matter is added.

Applicants thank Examiners Mukhopadhyay and Shosho for the courtesy of meeting their undersigned representative on September 1, 2010 to discuss this application. During this discussion, it was emphasized that the prior art references at best discuss sodium bicarbonate as a filler or inactive material but not a "result effective variable" that would impact the results nor give any reasonable expectation that the sodium bicarbonate as a carrier material would kill at least 43% of acarids. The Examiner's view is that the claim includes the term "comprises" leaving open the possibility of other ingredients, such as the oils in the NPL document, that could be the feature that causes the death claimed. Applicants continue to disagree and submit that the amount of sodium bicarbonate as the feature that is responsible for acaricidal effects is not taught or remotely suggested by the prior art. Indeed, there is simply no teachings in the references that sodium bicarbonate (which is recognized in the references as a filler) is to a variable requiring optimization. See, .e.g., See also *In re Antonie*, 559 F.2d 618, 195 USPQ 6, 8-9 (CCPA 1977) (exceptions to rule that optimization of a result-effective variable is obvious, such as where the results of optimizing the variable are unexpectedly good or where the variable was not recognized to be result effective). See also *Ex parte Whalen*, 89 USPQ2d 1078 (Bd. Pat. App. & Int. 2008).

To assuage the Examiner's view, Applicants have further amended the claims to define that the sodium bicarbonate is in the powder due to its acaricidal effects (something that is not taught in the cited art) and that the powder used in the claimed method is free of

neurotoxic substances thereby excluding from the scope of the claims the compositions of the cited art. Further details on these points follow.

The rejections combining Bessette (I), Bessette (II), NPL “Acarid killer” or Knight taken in view of NPL Mills and Misato; and further in view of Applying Pesticides correctly or NPL Inorganic compounds--silica gel should not be sustained.

Specifically, Bessette I (US6342535B1) discloses a method for killing insects, arachnids and larvae using a pesticide. The pesticide is a **neurotransmitter effector** with a carrier (abstract lines 1-6). Bessette describes a long list of different compositions using such neurotransmitter effector pesticide active ingredients. The neurotransmitter effector induces death of the pest (see TABLE 1 Col. 5) demonstrating the neurotoxicity of those neurotransmitter effectors. Bessette (I) listed among those compositions, a dry powder formulation (Col. 15, Lines 33-42) using the neurotransmitter effector with a combination of several carriers or bulk agents: calcium carbonate, sodium bicarbonate, diatomaceous earth and silica bulk agent Hi-Sil 233 from PPG Industries.

Bessette I is silent on the effect of sodium bicarbonate as active ingredient on acarids and unlike the claims requires neurotoxic substances.

Moreover, one of skill in the art reading Bessette I, **assuming the specific selection of sodium bicarbonate in the long list of carriers**, would understand that Bessette I teaches a **preferred** amount of **sodium bicarbonate** in dry powder to be between **15 and 25 w%**, outside the scope of the claims.

Bessette II (US6887899B1) discloses a pesticidal composition for the control of **dust mites** containing one or more plant essential oils (abstract, lines 1-2), which are believed to antagonize a **pest’s nerve receptors** (Col. 3 Line 62). Therefore Bessette II also teaches the person skilled in the art to use **neurotoxic substances**. Bessette II discloses a method for

controlling dust mites by application of such compositions on mammals and household (Col. 1, line 19).

Bessette II also discloses a long list of different carriers or adjuvants such as: Microcel E clay, Diatomaceous earth, HI Sil 233 silica from PPG, S-1080 resin emulsions, sodium bicarbonate, calcium carbonate, peppermint oil. In Example 2 (Col. 7 and table at Col. 8) Bessette II describes a composition with essential oils in which Sodium bicarbonate content is **19.6 or 22 w%**, outside the scope of the claims..

NPL “**Acarid killer**” discloses a composition against dust insects and acarids, comprising essential oils *as active ingredients* such as eugenol, phenetethylpropionate **similar to Bessette II compositions**, therefore believed at the time the invention was made to be target a **pest’s nerve receptors**.

In NPL, sodium bicarbonate is included here again in a long list of **other ingredients** (so that **not included** in the list of active ingredient), including: Kaolin, Sodium Bicarbonate, Calcium carbonate, Soybean oil, Wintergreen oil.

Therefore the person skilled in the art looking for a process to combat acarids into cereal storage without neurotoxic substance, would not have found direction or motivation in NPL to the claimed process.

Knight describes a composition for controlling **insects** comprising 5-91% of alkaline earth carbonate, 6-95% alkali metal bicarbonate, 1-93% scenting agent, and up to 90% absorbent material (Col. 3, lines 34-38). Knight teaches that **insects** have a waxy coating called exoskeleton typically comprising multiple body plates joined together by cartilaginous membrane (Col. 2 Line 31-34), and a careful reading of Knight shows that the piercing of exoskeleton occurs indeed between insect’s protective body plates (Col. 2 Line 64-68): it is the movement of the joint between bodyplates which causes the piercing of the

exoskeleton. Acarids are arthropod that **are not** insects (“insects”: from latin in secta = in sections), therefore not having multiple body plates described by Knight.

Knight is silent on sodium bicarbonate as acaricidal active ingredient, and is also silent on a method to treat specific acarids developing on cereals. Moreover the composition described by Knight comprising 1-93% scenting agent may also impair the gustative qualities of cereals for human or animal food uses.

Therefore the ordinary person skilled in the art of combating acarids in the storage of cereals, reading:

- Bessette I teaching a pesticide composition with **neurotoxic** substances and a preferred amount of sodium bicarbonate **between 15 and 25%** among a long list of other carriers, - and Bessette II teaching a pesticidal composition against **dust mites** on **mammals** and **household** comprising essential oils may be acting as neurotoxic substances and in one of his composition in a long list of different carriers, sodium bicarbonate there again between **19.6 or 22 w%**,

- and **NPL “Acarid killer”** teaching a composition against dust insects and acarids, comprising 5% neurotransmitter effector essential oils as active ingredients in compositions similar to Bessette, referring to sodium bicarbonate as a **non active ingredient** against insects and acarids, and among a long list of other carriers or adjuvants,

- or Knight teaching a composition for controlling **insects** comprising 5-91% of alkaline earth carbonate, 6-95% alkali metal bicarbonate, **1-93% scenting agent**, and up to 90% absorbent material; Knight being silent on acarids and **teaching away the use** of his compositions on pest with no body plates such as acarids,

would not have come obviously to the claimed process for combating acarids in the storage of cereals, using a powder comprising more than 40% by weight of sodium bicarbonate used for its acaricidal effects and free of neurotoxic substances.

Indeed Bessette teaches a preferred content of sodium bicarbonate as a carrier below 25 weight %, **NPL “Acarid killer”** confirm that sodium bicarbonate is not an active ingredient related to dust mites, and all the references either use strong odor essential oils impacting gustative quality of the cereals (**Bessette I, II, NPL Acarid killer**) or teach away the use of compositions comprising sodium bicarbonate on non insect pests (Knight).

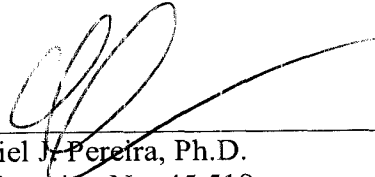
The other references: “Applying Pesticides Correctly, or NPL “Silica”, NPL Mills and Misato, cited in an obviousness rejection combination with Bessette I or Bessette I in view of Bessette II, NPL Acarid Killer or Knight, fail to make up for that lacking and/ or that teaching away in the primary references.

Reconsideration and withdrawal of the rejections is requested.

A Notice of Allowance is also requested.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, L.L.P.



Daniel J. Pereira, Ph.D.
Registration No. 45,518

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/09)